

WHAT IS CLAIMED IS:

1. A vocal training device, comprising:

means for tactile biofeedback, said tactile
5 biofeedback means adapted to assist a vocal trainee achieve
a desired vocal output.

2. The vocal training device of Claim 1, further
comprising an interactive unit adapted to compare and
10 analyze a vocal trainee generated note against a target
note generated by said interactive unit.

3. The vocal training device of Claim 2, wherein the
vocal trainee generated note is conveyed to said
15 interactive unit via a microphone.

4. The vocal training device of Claim 3, wherein
said target note is audibly generated by said interactive
unit by selecting a corresponding target note key.

20

5. The vocal training device of Claim 4, further
comprising means for auditory biofeedback, said auditory

biofeedback means adapted to assist the vocal trainee achieve a desired vocal output.

6. The vocal training device of Claim 5, wherein
5 said auditory biofeedback means is an earpiece.

7. The vocal training device of Claim 6, wherein
audibly generated said target note is conveyed to said
earpiece for audible reception and biofeedback to the vocal
10 trainee.

8. The vocal training device of Claim 7, wherein the
vocal trainee generated note is conveyed to said
interactive unit, compared and analyzed against said target
15 note, and subsequently looped back to said earpiece for
audible reception and biofeedback to the vocal trainee.

9. The vocal training device of Claim 8, further
comprising means for visual biofeedback, said visual
20 biofeedback means adapted to assist the vocal trainee
achieve a desired vocal output.

10. The vocal training device of Claim 9, wherein said visual biofeedback means is a visual graphical interface for visually conveying vocal training information to the vocal trainee.

5

11. The vocal training device of Claim 10, wherein said target note is visually generated on said visual graphical interface by said interactive unit by selecting a corresponding target note key.

10

12. The vocal training device of Claim 11, wherein visually generated said target note is in Roman alphabet format corresponding to said target note.

15

13. The vocal training device of Claim 12, wherein visually generated said target note is in the form of an indicator light corresponding to said target note.

20

14. The vocal training device of Claim 13, wherein the vocal trainee generated note is conveyed to said interactive unit, compared and analyzed against said target note, and subsequently displayed in Roman alphabet format on said visual graphical interface for visual comparison of

same against said target note also displayed in Roman
alphabet format on said visual graphical interface.

15. The vocal training device of Claim 14, wherein
5 the vocal trainee generated note is conveyed to said
interactive unit, compared and analyzed against said target
note, and subsequently displayed as an indicator light on
said visual graphical interface for visual comparison of
same against said target note also displayed as an
10 indicator light on said visual graphical interface.

16. The vocal training device of Claim 3, wherein
said tactile biofeedback means is a physical vibration
sensed by the vocal trainee.

15

17. The vocal training device of Claim 16, wherein
said tactile biofeedback means is selected from the group
consisting of vibrational pads worn against the throat of
the vocal trainee, vibrational helmets, vibrational
20 earpiece, vibrational nosepiece, vibrational shoes,
vibrational wristband, vibrational vest, vibrational chest
piece, vibrational belt, vibrational body suit, vibrational
eyewear, vibrational skullcap, vibrational head apparel,

vibrational headgear, vibrational forearm unit, vibrational gel floor mat, and combinations thereof.

18. The vocal training device of Claim 17, wherein
5 said target note is translated into a physical vibration by
said interactive unit by selecting a corresponding target
note key, and wherein said physical vibration is
subsequently conveyed to the vocal trainee for physical or
tactile perception of same.

10

19. The vocal training device of Claim 18, wherein
adjusting the vocal trainee generated note to match said
target note, and thus minimize discordance between same,
results in a seemingly corresponding diminishment of said
15 physical vibration sensed by the vocal trainee.

20. A vocal training device, comprising:

means for tactile biofeedback;

means for auditory biofeedback; and,

20 means for visual biofeedback,

wherein said tactile biofeedback means, said auditory
biofeedback means and said visual biofeedback means are

adapted to assist a vocal trainee achieve a desired vocal output.

21. The vocal training device of Claim 20, further
5 comprising an interactive unit adapted to compare and
analyze a vocal trainee generated note against a target
note generated by said interactive unit.

22. The vocal training device of Claim 21, wherein
10 the vocal trainee generated note is conveyed to said
interactive unit via a microphone.

23. The vocal training device of Claim 22, wherein
said target note is audibly generated by said interactive
15 unit by selecting a corresponding target note key.

24. The vocal training device of Claim 23, wherein
said auditory biofeedback means is an earpiece.

20 25. The vocal training device of Claim 24, wherein
audibly generated said target note is conveyed to said
earpiece for audible reception and biofeedback to the vocal
trainee.

26. The vocal training device of Claim 25, wherein the vocal trainee generated note is conveyed to said interactive unit, compared and analyzed against said target note, and subsequently looped back to said earpiece for
5 audible reception and biofeedback to the vocal trainee.

27. The vocal training device of Claim 26, wherein said visual biofeedback means is a visual graphical interface for visually conveying vocal training information
10 to the vocal trainee.

28. The vocal training device of Claim 27, wherein said target note is further visually generated on said visual graphical interface by said interactive unit by
15 selecting said corresponding target note key.

29. The vocal training device of Claim 28, wherein the vocal trainee generated note is conveyed to said interactive unit, compared and analyzed against said target
20 note, and subsequently displayed in Roman alphabet format on said visual graphical interface for visual comparison of same against said target note also displayed in Roman alphabet format on said visual graphical interface.

30. The vocal training device of Claim 29, wherein the vocal trainee generated note is conveyed to said interactive unit, compared and analyzed against said target note, and subsequently displayed as an indicator light on said visual graphical interface for visual comparison of same against said target note also displayed as an indicator light on said visual graphical interface.

31. The vocal training device of Claim 30, wherein said tactile biofeedback means is a physical vibration sensed by the vocal trainee.

32. The vocal training device of Claim 31, wherein said tactile biofeedback means is selected from the group consisting of vibrational pads worn against the throat of the vocal trainee, vibrational helmets, vibrational earpiece, vibrational nosepiece, vibrational shoes, vibrational wristband, vibrational vest, vibrational chest piece, vibrational belt, vibrational body suit, vibrational eyewear, vibrational skullcap, vibrational head apparel, vibrational headgear, vibrational forearm unit, vibrational gel floor mat, and combinations thereof.

33. The vocal training device of Claim 32, wherein said target note is translated into a physical vibration by said interactive unit by selecting said corresponding target note key, and wherein said physical vibration is
5 subsequently conveyed to the vocal trainee for physical or tactile perception of same.

34. The vocal training device of Claim 33, wherein adjusting the vocal trainee generated note to match said
10 target note results in harmonization of said target note and the vocal trainee generated note as audibly perceived by the vocal trainee via said earpiece.

35. The vocal training device of Claim 34, wherein
15 adjusting the vocal trainee generated note to match said target note results in the vocal trainee generated note being reassigned a note value displayed in said Roman alphabet format corresponding to or matching said target note as displayed in said Roman alphabet format on said
20 visual graphical interface.

36. The vocal training device of Claim 35, wherein adjusting the vocal trainee generated note to match said

target note results in the vocal trainee generated note being reassigned a note value displayed as said indicator light corresponding to or matching said target note as displayed as another said indicator light on said visual
5 graphical interface.

37. The vocal training device of Claim 35, wherein adjusting the vocal trainee generated note to match said target note results in a corresponding and progressive
10 change in color of said indicator light to match a stagnate color of another said indicator light corresponding to said target note as displayed on said visual graphical interface.

15 38. The vocal training device of Claim 35, wherein adjusting the vocal trainee generated note to match said target note results in a corresponding and progressive change in color of a series of indicator lights to match a stagnate color of an indicator light corresponding to said
20 target note as displayed on said visual graphical interface.

39. The vocal training device of Claim 36, wherein adjusting the vocal trainee generated note to match said target note, and thus minimize discordance between same, results in a seemingly corresponding diminishment of said physical vibration sensed by the vocal trainee.

40. The vocal training device of Claim 39, further comprising an external speaker system for providing the vocal trainee with additional auditory biofeedback.

41. The vocal training device of Claim 40, further comprising an means for recoding the vocal trainee's vocal training session for subsequent analysis of same.

42. A method of vocal training, comprising the steps of:

- a. generating a vocal pitch; and,
- b. adjusting the vocal pitch to match a target note translated into a sensed biofeedback, said sensed biofeedback selected from the group consisting of visual biofeedback, auditory biofeedback, tactile biofeedback, and combinations thereof.

43. A method of vocal training, comprising the steps
of:
- a. obtaining a vocal training device, comprising:
means for tactile biofeedback;
5 means for auditory biofeedback; and,
means for visual biofeedback; and,
 - b. selecting a target note for vocal reproduction;
 - c. generating an auditory pitch corresponding to the
pitch of said target note;
 - 10 d. audibly recognizing said auditory pitch via said
auditory biofeedback means;
 - e. visually recognizing said auditory pitch via said
visual biofeedback means;
 - f. generating a physical vibration corresponding to
15 the frequency of said target note;
 - g. tactilely recognizing said physical vibration via
said tactile biofeedback means;
 - h. producing said auditory pitch into a vocalized
pitch;
 - 20 i. sensing the discordant biofeedback between said
auditory pitch and said vocalized pitch via said
tactile biofeedback means; and,

j. adjusting said vocalized pitch to match said auditory pitch by minimizing said discordant biofeedback as recognized by a seemingly corresponding diminishment of said physical vibration.

44. A vocal training device, comprising:

an earpiece adapted to vibrate upon encounter of user-generated sound waves, thereby providing the user with tactile biofeedback.

45. The vocal training device of Claim 44, further comprising a main chamber bifurcated by a vibratory membrane.

46. The vocal training device of Claim 45, wherein a first chamber of said main chamber is adapted to receive and deflect an ambient reference pitch, thereby resulting in vibration of said vibratory membrane.

47. The vocal training device of Claim 46, wherein a second chamber of said main chamber is adapted to receive

the user-generated sound waves for disruption, and thus, further vibration of said vibratory membrane.

48. The vocal training device of Claim 47, wherein
5 vibrations from said vibratory membrane are channeled into the user's ear canal for tactile reception and sensing of same as tactile biofeedback.

49. The vocal training device of Claim 48, wherein
10 user sensation of discordant biofeedback between the user-generated sound waves and said ambient reference pitch, as sensed by the user via discordant vibrations delivered via said vibrating vibratory membrane, enables the user to adjust his/her user-generated sound waves in an attempt to
15 minimize the discordant biofeedback as recognized by a seemingly corresponding diminishment of said tactile biofeedback.